



STRUCTURE AND DEVELOPMENT OF CARBONATE MOUNDS ALONG THE NE ATLANTIC MARGIN

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Giant carbonate mounds between 500-1200 m water depth along both the SE and SW margins of Rockall Trough rise 5 to 300 m above the surrounding seafloor and have diameters at their basis of up to 5 km. Buried mounds, at relatively shallow depth below the seafloor are also found. Both individual and complex clusters of mounds can be recognized. Smaller and individual, sometimes buried mounds are found at the upper slope. On the SW Rockall Trough margin, higher, steeper and individual mounds are found deeper downslope (900-1100 m). At the middle slope the mounds merge into a complex structure and form complex clusters with a very irregular upper surface and an apparent lack of internal reflectors (600-1000 m depth). These clusters are oriented perpendicular and slightly oblique to the prevailing bathymetry, and show on TOBI profiles as linear ridges. Further results of the TOBI survey in summer 2002 show that the distribution of mounds along the flanks of SW Rockall Trough is considerably more widespread than previously considered, and also that the mounds appear to form constructional elements on a large plateau. Erosional channels between mounds identify the strong interaction between mound shape and strong bottom currents along the slopes of mounds. On the upper flank the mounds are delineated by a field of large gravelly sediment waves of 500m wavelength oriented parallel to the margin in the central part and more curved to the north. On their lower flank slide scars do locally occur.